### (19) World Intellectual Property Organization

International Bureau



## | 1920 | 1819 | 18 | 1821 | 1931 | 1821 | 1821 | 1831 | 1831 | 1831 | 1832 | 1833 | 1833 | 1834 | 1834 | 1834 |

(43) International Publication Date 18 August 2005 (18.08.2005)

### **PCT**

# (10) International Publication Number WO 2005/076545 A1

(51) International Patent Classification7:

H04L 12/56

(21) International Application Number:

PCT/IB2005/050472

(22) International Filing Date: 4 February 2005 (04.02.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/542,529

6 February 2004 (06.02.2004) US

60/633,227

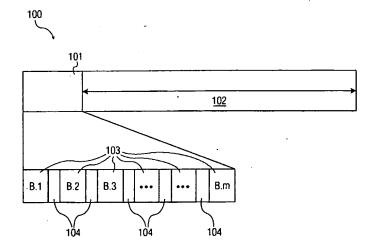
3 December 2004 (03.12.2004) US

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS, N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HABETHA, Joerg [DE/DE]; P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US). DEL PRADO PAVON, Javier [ES/US]; P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).

- (74) Common Representative: KONINKLIJKE PHILIPS ELECTRONICS, N.V.; c/o WAXLER, Aaron, P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: A SYSTEM AND METHOD FOR HIBERNATION MODE FOR BEACONING DEVICES



(57) Abstract: A system (400), device (500) (401), and method are provided for power saving in a wireless communication network (400), where all devices (401<sub>i</sub>) regularly transmit a beacon (600) but can enter a hibernation mode in which they do not transmit b eacons (600) and operate in a power-saving state. A device (400) announces the start (303) and duration (304) of the hibernation period in its beacon (600) prior to its hibernation period. The neighboring devices (401<sub>i</sub>) keep information on the presence of the beacon (600) of the hibernating device (401) in their own beacons (600) in order to block the beacon slot (204) for the hibernating device (401) during its sleep time. Devices (401<sub>i</sub>) furthermore include an information element (604) in their beacons (600) that contains all receiver addresses for which a device (401<sub>i</sub>) has data pending to be sent.



### Declarations under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,

HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.